

## ABSTRACT

A humidifier and humidity sensor is disclosed for use with a breathing assistance apparatus. The humidity sensor preferably includes means to sense absolute humidity, relative humidity and/or temperature at both the patient end and humidifier end. The humidifier may also include provision to both control independently the humidity and temperature of the gases. Further, a chamber manifold is disclosed to facilitate easy connection of the humidifier to various outlets, inlets and sensors. A heated conduit is described which provides a more effective temperature profile along its length.